

WHAT IS CLAIMED IS:

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1. A communication device connectable to an IP network, comprising:

a congestion monitor unit monitoring whether the communication device is congested; and
10 a congestion information creating unit creating congestion information concerning a congested state of the communication device when the congestion monitor unit detects the congested state thereof, the congestion information being sent to
15 other devices connected to the IP network.

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2. The communication device as claimed in claim 1, further comprising:

a routing table storing information used for routing an input packet; and
an updating unit updating the routing
25 table upon receiving congestion information from another device.

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3. The communication device as claimed in claim 1, wherein said congestion monitor unit detects a situation in which an input queue of the communication device overflows with packets so that
35 packets are discarded.

4. The communication device as claimed in claim 1, wherein said congestion monitor unit detects a situation in which packets are stored in an input queue of the communication device over a predetermined queue length.

5. The communication device as claimed in claim 1, wherein the congestion information created by said congestion information creating unit is sent to other communication devices adjacent to the communication device.

6. The communication device as claimed in claim 1, wherein the congestion information created by said congestion information creating unit is sent to other communication devices located within a given network range.

7. The communication device as claimed in claim 1, further comprising a unit for relaying congestion information received from another network to a route via which packets can be transported.

8. The communication device as claimed in claim 1, further comprising a unit for determining

whether a route that can avoid congestion for an input packet is available.

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9. The communication device as claimed in claim 1, further comprising a unit sending an input packet to an original route if congestion information is received from another communication device and there is a congested communication device in an alternative route that can avoid congestion related to said congestion information received.

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10. The communication device as claimed in claim 1, further comprising a unit discarding an input packet if congestion information is received from another communication device and there is a congested communication device in an alternative route that can avoid congestion related to said congestion information received.

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11. The communication device as claimed in claim 1, wherein said congestion monitor unit monitors a frequency of occurrence of congested state.

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12. The communication device as claimed

in claim 1, further comprising a unit notifying other communication devices of a frequency of occurrence of congested state monitored by said congestion monitor unit and sending congestion
5 information received from another communication device to a route having a smallest frequency of occurrence of congested state based on the congestion information received.

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13. The communication device as claimed in claim 1, further comprising a unit sending
15 information indicative of restoration from the congested state to the other communication networks.

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14. The communication device as claimed in claim 1, wherein said congestion monitor unit monitors one of an input interface and an output interface of said communication device.

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15. A communication control method
30 comprising the steps of:
monitoring whether the communication device is congested;
creating congestion information concerning a congested state of the communication device when
35 the congested state thereof is detected, the congestion information being sent to other devices connected to the IP network; and

defining an accounting system based on a
packet discard ratio determined based on a
congestion avoiding control.

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16. A communication control method
comprising the steps of:
- 10 monitoring whether the communication
device is congested; and
 creating congestion information concerning
a congested state of the communication device when
the congested state thereof is detected, the
- 15 congestion information being sent to other devices
connected to the IP network.
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17. The communication control method as
claimed in claim 16, further comprising a step of:
- updating a routing table storing
information used for routing an input packet upon
- 25 receiving congestion information from another device.

- 30 18. A system comprising:
 a plurality of communication devices,
 each of the plurality of communication
devices comprising:
- a congestion monitor unit monitoring
- 35 whether the communication device is congested; and
 a congestion information creating unit
creating congestion information concerning a

congested state of the communication device when the congestion monitor unit detects the congested state thereof, the congestion information being sent to other devices connected to the IP network.

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